# **Refine Search**

### Search Results -

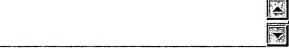
Terms	Documents
L5 and (MegK or MegCV or MegBIII or MegCIV)	4

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

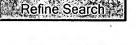
Search:

L6

Database:









## Search History

DATE: Friday, April 13, 2007 Purge Queries Printable Copy Create Case

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DB=U	SPT; PLUR=YES; OP=OR		
<u>L6</u>	L5 and (MegK or MegCV or MegBIII or MegCIV)	4	<u>L6</u>
<u>L5</u>	(gene cluster and Meg)	105245	<u>L5</u>
<u>L4</u>	L1 and (MegK)	1	<u>L4</u>
<u>L3</u>	L1 and MegL	0	<u>L3</u>
DB=P	GPB; PLUR=YES; OP=OR		
<u>L2</u>	L1	0	<u>L2</u>
DB=U	SPT; PLUR=YES; OP=OR		
<u>L1</u>	hutchinson.in.	1366	<u>L1</u>

**END OF SEARCH HISTORY** 

## Hit List

**Bkwd Refs** First Hit Fwd Refs Clear Generate Collection Print : Generate OACS Search Results - Record(s) 1 through 1 of 1 returned. 1. Document ID: US 7189549 B2 L4: Entry 1 of 1 File: USPT Mar 13, 2007 US-PAT-NO: 7189549 DOCUMENT-IDENTIFIER: US 7189549 B2 TITLE: Recombinant polynucleotides encoding pro-geldanamycin producing polyketide synthase and accessory proteins, and uses thereof DATE-ISSUED: March 13, 2007 PRIOR-PUBLICATION: DOC-ID DATE US 20040077058 A1 April 22, 2004 INVENTOR-INFORMATION: CITY COUNTRY NAME STATE ZIP CODE Hutchinson; Richard C. San Mateo CA US . Reid; Ralph C. San Rafael CA US Hu; Zhihao Castro Valley CA US Rascher; Andreas San Francisco CA US Schirmer; Andreas Hayward CA US McDaniel; Robert Palo Alto CA US US-CL-CURRENT: 435/190; 435/193, 435/252.35, 435/320.1, 435/69.7, 536/23.2 Title Citation Front Review Classification Date Reference Sequences Alterburits Claims KMC Draw De Print<sup>®</sup> Clear Generate Collection Fwd Refs Bkwd Refs Generate OACS: Terms Documents 1 Ll and (MegK)

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## **Hit List**

First Hit Clear Generate Collection | Print Fwd Refs Bkwd Refs | Bkwd Refs |

Search Results - Record(s) 1 through 4 of 4 returned.

☐ 1. Document ID: US 7189549 B2

L6: Entry 1 of 4

File: USPT

Mar 13, 2007

US-PAT-NO: 7189549

DOCUMENT-IDENTIFIER: US 7189549 B2

TITLE: Recombinant polynucleotides encoding pro-geldanamycin producing polyketide synthase and accessory proteins, and uses thereof

DATE-ISSUED: March 13, 2007

PRIOR-PUBLICATION:

DOC-ID

DATE

US 20040077058 A1

April 22, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE ZIP CODE	COUNTRY
Hutchinson; Richard C.	San Mateo	CA	US
Reid; Ralph C.	San Rafael	CA	US
Hu; Zhihao	Castro Valley	CA	US
Rascher; Andreas	San Francisco	CA	US
Schirmer; Andreas	Hayward	CA	US
McDaniel; Robert	Palo Alto	CA	US

US-CL-CURRENT: 435/190; 435/193, 435/252.35, 435/320.1, 435/69.7, 536/23.2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Drawi De

☐ 2. Document ID: US 7011959 B1

L6: Entry 2 of 4

File: USPT

Mar 14, 2006

US-PAT-NO: 7011959

DOCUMENT-IDENTIFIER: US 7011959 B1

TITLE: Heterologous production of polyketides

DATE-ISSUED: March 14, 2006

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

US San Francisco CA Santi; Daniel Peck; Larry San Carlos CA US US Belmont CA Dayem; Linda US Kealey; James San Rafael CA

US-CL-CURRENT: 435/76; 435/252.33

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Altachments | Claims | KWIC | Draw, De

☐ 3. Document ID: US 6627427 B1

L6: Entry 3 of 4 File: USPT Sep 30, 2003

US-PAT-NO: 6627427

DOCUMENT-IDENTIFIER: US 6627427 B1

TITLE: Heterologous production of 15-methyl-6-deoxyerthronolide B

DATE-ISSUED: September 30, 2003

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Katz; Leonard Oakland CA Revill; Peter Oakland CA

US-CL-CURRENT: 435/252.3

Full Title Citation Front Review Classification Date Reference <u>Sequences Attachments</u> Claims KWIC Draw. De

☐ 4. Document ID: US 6524841 B1

L6: Entry 4 of 4 File: USPT Feb 25, 2003

US-PAT-NO: 6524841

DOCUMENT-IDENTIFIER: US 6524841 B1

TITLE: Recombinant megalomicin biosynthetic genes and uses thereof

DATE-ISSUED: February 25, 2003

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

McDaniel; Robert Palo Alto CA Volchegursky; Yanina Emeryville CA

US-CL-CURRENT: 435/252.3; 435/252.35, 435/254.11, 435/320.1, 435/325, 435/419, 536/23.1, 536/23.2, 536/23.7

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KWIC Draw De

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FILE 'HOME' ENTERED AT 15:33:39 ON 13 APR 2007

=> file medline, uspatful, dgene, embase, wpids, biosis

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=> s (MegL or MegK or MegF or MegBIII or MegCV)
L1 548 (MEGL OR MEGK OR MEGF OR MEGBIII OR MEGCV)

=> s l1 and (gene cluster)
3 FILES SEARCHED...

L2 18 L1 AND (GENE CLUSTER)

=> s l2 and (vector)

L3 14 L2 AND (VECTOR)

=> s 13 and (host cell)
3 FILES SEARCHED...

L4 14 L3 AND (HOST CELL)

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L4 ANSWER 1 OF 14 USPATFULL on STN

TI Heterologous production of polyketides

AB Recombinant E. coli host cells that comprise recombinant DNA expression vectors that drive expression of methylmalonyl CoA mutase from Propionibacterium shermanii or Streptomyces cinnamonensis as well as Propionibacterium shermanii epimerase can produce S-methylmalonyl CoA, a required substrate for the production of polyketides by most modular polyketide synthases and is not present in wild-type E. coli host cells.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2006:63029 USPATFULL

TITLE: INVENTOR(S): Heterologous production of polyketides

Peck, Larry, San Carlos, CA, UNITED STATES Dayem, Linda, Belmont, CA, UNITED STATES Kealey, James, San Rafael, CA, UNITED STATES

Santi, Daniel, San Francisco, CA, UNITED STATES

PATENT ASSIGNEE(S): Kosan Biosciences, Inc., Hayward, CA, UNITED STATES

NEWS IPC8

NEWS X25

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X.25 communication option no longer available

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#### (U.S. corporation)

KIND DATE NUMBER -----US 7011959 B1 20060314 US 2000-699136 20001027 PATENT INFORMATION: APPLICATION INFO.: 20001027 (9)

NUMBER DATE

US 1999-161703P 19991027 (60) PRIORITY INFORMATION:

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Kerr, Kathleen LEGAL REPRESENTATIVE: Ashley, Gary W.

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 9 Drawing Figure(s); 9 Drawing Page(s)

LINE COUNT: 3239

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 2 OF 14 USPATFULL on STN

Gene cluster for fostriecin biosynthesis TI

Domains of fostriecin polyketide synthase and modification enzymes and AB polynucleotides encoding them are provided. Methods to prepare fostriecin in pharmaceutically useful quantities are described, as are methods to prepare fostriecin analogs and other polyketides using the polynucleotides encoding fostriecin polyketide synthase domains or modifying enzymes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

2005:171298 USPATFULL ACCESSION NUMBER: TITLE: Gene cluster for fostriecin

biosynthesis

Reid, Ralph C., San Rafael, CA, UNITED STATES INVENTOR(S):

Hu, Zhihao, Castro Valley, CA, UNITED STATES

Tang, Li, Foster City, CA, UNITED STATES
KOSAN BIOSCIENCES, INC., A Delaware corporation, PATENT ASSIGNEE(S):

Hayward, CA, UNITED STATES (U.S. corporation)

KIND DATE NUMBER -----PATENT INFORMATION:

US 2005148045 A1 20050707 US 2004-922282 A1 20040818 (10) APPLICATION INFO.:

NUMBER DATE ------

US 2003-496306P 20030818 (60) PRIORITY INFORMATION: DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO LEGAL REPRESENTATIVE:

CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 5 Drawing Page(s)

LINE COUNT: 9199

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 3 OF 14 USPATFULL on STN

TI Disorazole polyketide synthase encoding polynucleotides

AB Domains of disorazole polyketide synthase and polynucleotides encoding them are provided. Methods to prepare disorazoles in pharmaceutically useful quantities are described, as are methods to prepare disorazole analogs and other polyketides using the polynucleotides encoding disorazole polyketide synthase domains or modifying enzymes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2005:37505 USPATFULL

Disorazole polyketide synthase encoding polynucleotides TITLE:

Julien, Bryan, Oakland, CA, UNITED STATES INVENTOR(S):

Reid, Ralph C., San Rafael, CA, UNITED STATES

PATENT ASSIGNEE(S): Kosan Biosciences, Inc., Hayward, CA, UNITED STATES,

94545 (U.S. corporation)

NUMBER KIND DATE ------PATENT INFORMATION: US 2005032184 A1 20050210

US 2003-729802 APPLICATION INFO.: A1 20031205 (10)

> NUMBER DATE

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PRIORITY INFORMATION: US 2003-512892P 20031020 (60)

US 2003-484934P 20030702 (60)

US 2003-473311P 20030522 (60) US 2003-465038P 20030423 (60) US 2003-455521P 20030317 (60)

US 2002-431272P 20021206 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO

CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834

NUMBER OF CLAIMS: 20 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 7 Drawing Page(s)

LINE COUNT: 4711

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 4 OF 14 USPATFULL on STN

Recombinant genes for polyketide modifying enzymes ΤI

AB Materials and methods to produce modified polyketides are disclosed. The

biosynthesis, transfer and regulator genes for various sugars to

effectuate polyketide modification are disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2004:260518 USPATFULL

TITLE: Recombinant genes for polyketide modifying enzymes INVENTOR (S): Hutchinson, C. Richard, San Mateo, CA, UNITED STATES

Katz, Leonard, Oakland, CA, UNITED STATES Reid, Ralph, San Rafael, CA, UNITED STATES Hu, Zhihao, Castro Valley, CA, UNITED STATES Gramajo, Hugo, Berkeley, CA, UNITED STATES

NUMBER KIND DATE -----US 2004203015 PATENT INFORMATION: A1 20041014

US 2003-611442 APPLICATION INFO.: A1 20030630 (10)

> NUMBER DATE -----

PRIORITY INFORMATION: US 2002-393016P 20020628 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Ted Apple, (Townsend and Townsend and Crew), 379 Lytton

Avenue, Palo Alto, CA, 94301

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 3 Drawing Page(s)

LINE COUNT: 2721

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 5 OF 14 USPATFULL on STN

TI Heterologous production of polyketides

Recombinant host cells that comprise recombinant DNA expression vectors that drive expression of a product and a precursor for biosynthesis of that product can be used to produce useful products such as polyketides in host cells that do not naturally produce the product or precursor at low levels due to the absence of the precursor or the presence of the precursor in rate limiting amounts.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:239735 USPATFULL

TITLE: Heterologous production of polyketides

INVENTOR(S): Santi, Daniel, San Francisco, CA, UNITED STATES
Dayem, Linda, San Anselmo, CA, UNITED STATES

Dayem, Linda, San Anselmo, CA, UNITED STATES Kealey, James, San Anselmo, CA, UNITED STATES

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-942407, filed on 29

Aug 2001, PENDING Division of Ser. No. US 2000-699136,

filed on 27 Oct 2000, PENDING

NUMBER DATE

PRIORITY INFORMATION: US 1999-161703P 19991027 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: MORRISON & FOERSTER LLP, 3811 VALLEY CENTRE DRIVE,

SUITE 500, SAN DIEGO, CA, 92130-2332

NUMBER OF CLAIMS: 3 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 1 Drawing Page(s)

LINE COUNT: 3330

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 6 OF 14 USPATFULL on STN

TI Recombinant chalcomycin polyketide synthase and modifying genes

Domains of chalcomycin polyketide synthases and modification enzymes and polynucleotides encoding them are provided. Methods to prepare chalcomycin in pharmaceutically useful quantities are described, as are methods to prepare chalcomycin analogs and other polyketides using the polynucleotides encoding chalcomycin polyketide synthase domains or

modifying enzymes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:171894 USPATFULL

TITLE: Recombinant chalcomycin polyketide synthase and

modifying genes

INVENTOR(S): Katz, Leonard, Oakland, CA, UNITED STATES

Reid, Ralph C., San Rafael, CA, UNITED STATES Hu, Zhihao, Castro Valley, CA, UNITED STATES Schirmer, Andreas, Hayward, CA, UNITED STATES Ward, Shannon L., Pleasanton, CA, UNITED STATES Reeves, Christopher, Orinda, CA, UNITED STATES

NUMBER DATE

\_\_\_\_\_

PRIORITY INFORMATION: US 2002-420994P 20021024 (60) US 2003-493966P 20030808 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: MORRISON & FOERSTER LLP, 755 PAGE MILL RD, PALO ALTO,

CA, 94304-1018

NUMBER OF CLAIMS: 30 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 2 Drawing Page(s)

LINE COUNT: 9387

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

T.4 ANSWER 7 OF 14 USPATFULL on STN

Recombinant polynucleotides encoding pro-geldanamycin producing TI polyketide synthase and accessory proteins, and uses thereof

The invention relates to recombinant polyketide synthase enzymes, AB polyketide modifying proteins, and other proteins involved in polyketide biosynthesis or function. The invention provides domains of geldanamycin and herbimycin polyketide synthases, polynucleotides that encode such enzymes, and to host cells in which such encoding polynucleotides can be advantageously expressed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:101196 USPATFULL

TITLE: Recombinant polynucleotides encoding pro-geldanamycin

producing polyketide synthase and accessory proteins,

and uses thereof

INVENTOR(S): Hutchinson, Richard C., San Mateo, CA, UNITED STATES

Reid, Ralph C., San Rafael, CA, UNITED STATES Hu, Zhihao, Castro Valley, CA, UNITED STATES

Rascher, Andreas, San Francisco, CA, UNITED STATES

Schirmer, Andreas, Hayward, CA, UNITED STATES McDaniel, Robert, Palo Alto, CA, UNITED STATES

	NUMBER	KIND	DATE	,	
PATENT INFORMATION:	US 2004077058	Al	20040422		
	US 7189549	B2	20070313		
APPLICATION INFO.:	US 2003-461194	A1	20030613	(10)	
RELATED APPLN. INFO.:	Continuation-in-p	art of	Ser. No.	US 2002-212962,	filed

d on 5 Aug 2002, PENDING

	NUMBER DAT	E
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PRIORITY INFORMATION:	JS 2002-389255P 20020	614 (60)
	JS 2002-393929P 20020	703 (60)
	JS 2002-395275P 20020	712 (60)
	JS 2002-415326P 20020	930 (60)
	JS 2002-420820P 20021	024 (60)
•	JS 2002-433130P 20021	213 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: MORRISON & FOERSTER LLP, 755 PAGE MILL RD, PALO ALTO,

CA, 94304-1018

NUMBER OF CLAIMS: 48 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 11 Drawing Page(s)

LINE COUNT: 6799

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 8 OF 14 USPATFULL on STN

TI Heterologous production of polyketides

Recombinant host cells that comprise recombinant DNA expression vectors AB

that drive expression of a product and a precursor for biosynthesis of that product can be used to produce useful products such as polyketides in host cells that do not naturally produce the product or produce the product or precursor at low levels due to the absence of the precursor or the presence of the precursor in rate limiting amounts.

CAS INDEXING IS AVAILABLE FOR THIS PATENT. ACCESSION NUMBER: 2004:7438 USPATFULL

TITLE: Heterologous production of polyketides

INVENTOR(S): Santi, Daniel V., San Francisco, CA, UNITED STATES

Khosla, Chaitan, Stanfrod, CA, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION: US 2004005672 A1 20040108 APPLICATION INFO.: US 2003-371475 A1 20030221 (10)

NUMBER DATE

PRIORITY INFORMATION: US 2002-358936P 20020222 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Kosan Biosciences, Inc., Intellectual Property

Department, 3832 Bay Center Place, Hayward, CA, 94545

NUMBER OF CLAIMS: 20 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 13 Drawing Page(s)

LINE COUNT: 3491

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 9 OF 14 USPATFULL on STN

TI Production of polyketides

AB Recombinant host cells that comprise recombinant DNA expression vectors that drive expression of a product and a precursor for biosynthesis of that product can be used to produce useful products such as polyketides in host cells that do not naturally produce the product or produce the product at low levels due to the absence of the precursor or the presence of the precursor in rate limiting amounts.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:335016 USPATFULL
TITLE: Production of polyketides

INVENTOR(S): Katz, Leonard, Oakland, CA, UNITED STATES

Revill, Peter, Oakland, CA, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION: US 2003235892 A1 20031225 APPLICATION INFO.: US 2003-607809 A1 20030627 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 2000-697022, filed on 25 Oct

2000, GRANTED, Pat. No. US 6627427

NUMBER DATE

PRIORITY INFORMATION: US 1999-161414P 19991025 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: MORRISON & FOERSTER LLP, 3811 VALLEY CENTRE DRIVE,

SUITE 500, SAN DIEGO, CA, 92130-2332

NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 2 Drawing Page(s)

LINE COUNT: 2751

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 10 OF 14 USPATFULL on STN L4

ΤI Novel methods of diagnosis of metastatic colorectal cancer, compositions and methods of screening for modulators of metastatic colorectal cancer

AB Described herein are methods and compositions that can be used for diagnosis and treatment of metastatic colorectal cancer. Also described herein are methods that can be used to identify modulators of metastatic colorectal cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

2003:334944 USPATFULL ACCESSION NUMBER:

Novel methods of diagnosis of metastatic colorectal TITLE:

cancer, compositions and methods of screening for

modulators of metastatic colorectal cancer

Mack, David H., Menlo Park, CA, UNITED STATES INVENTOR(S):

Markowitz, Sanford David, Pepper Pike, OH, UNITED

PATENT ASSIGNEE(S): Eos Biotechnology, Inc., South San Francisco, CA (U.S.

corporation)

NUMBER KIND DATE -----US 2003235820 A1 20031225 US 2002-87080 A1 20020227 (10) PATENT INFORMATION: APPLICATION INFO.:

> NUMBER DATE -----

PRIORITY INFORMATION: US 2001-284555P 20010417 (60)

US 2001-281149P 20010402 (60) US 2001-272206P 20010227 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO LEGAL REPRESENTATIVE:

CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834

NUMBER OF CLAIMS: 21 . EXEMPLARY CLAIM: 1 LINE COUNT: 22670

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 11 OF 14 USPATFULL on STN L4

TI Heterologous production of 15-methyl-6-deoxyerthronolide B

AB Recombinant host cells that comprise recombinant DNA expression vectors that drive expression of a product and a precursor for biosynthesis of that product can be used to produce useful products such as polyketides in host cells that do not naturally produce the product or produce the product at low levels due to the absence of the precursor or the presence of the precursor in rate limiting amounts.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:260669 USPATFULL

TITLE: Heterologous production of 15-methyl-6-

deoxyerthronolide B

INVENTOR(S): Katz, Leonard, Oakland, CA, United States Revill, Peter, Oakland, CA, United States

Kosan Biosciences, Inc., Hayward, CA, United States PATENT ASSIGNEE(S):

(U.S. corporation)

NUMBER KIND -----PATENT INFORMATION: US 6627427 B1 . 20030930 US 2000-697022 APPLICATION INFO.: 20001025 (9)

> NUMBER DATE -----

PRIORITY INFORMATION: US 1999-161414P 19991025 (60)

DOCUMENT TYPE': Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Achutamurthy, Ponnathapu

ASSISTANT EXAMINER: Kerr, Kathleen

LEGAL REPRESENTATIVE: Morrison & Foerster LLP, Kaster, Kevin

NUMBER OF CLAIMS: 12 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 20 Drawing Figure(s); 20 Drawing Page(s)

LINE COUNT: 3167

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 12 OF 14 USPATFULL on STN

TI Recombinant megalomicin biosynthetic genes and uses thereof

AB Recombinant nucleic acids that encode all or a portion of the megAI gene of the megalomicin polyketide synthase (PKS) of Micromonospora megalomicea are used to produce recombinant PKS enzymes in host cells to make megalomicin, megalomicin derivatives, and other polyketides that are useful as antibiotics, motilides, and antiparasitics.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:53694 USPATFULL

TITLE: Recombinant megalomicin biosynthetic genes and uses

thereof

INVENTOR(S): McDaniel, Robert, Palo Alto, CA, United States

Volchegursky, Yanina, Emeryville, CA, United States

PATENT ASSIGNEE(S): Kosan Biosciences, Inc., Hayward, CA, United States

(U.S. corporation)

NUMBER DATE

PRIORITY INFORMATION: US 2000-190024P 20000317 (60)

US 1999-158305P 19991008 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Achutamurthy, Ponnathapu

ASSISTANT EXAMINER: Kerr, Kathy

LEGAL REPRESENTATIVE: Morrision & Foerster LLP

NUMBER OF CLAIMS: 7 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 70 Drawing Figure(s); 70 Drawing Page(s)

LINE COUNT: 6745

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 13 OF 14 USPATFULL on STN

TI Isolated gene for methylmalonyl CoA epimerase and uses thereof

AB Recombinant host cells that comprise recombinant DNA expression vectors that drive expression of a product and a precursor for biosynthesis of that product can be used to produce useful products such as polyketides in host cells that do not naturally produce the product or produce the product or precursor at low levels due to the absence of the precursor or the presence of the precursor in rate limiting amounts.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:258831 USPATFULL

TITLE: Isolated gene for methylmalonyl CoA epimerase and uses

thereof

INVENTOR(S): Santi, Daniel, San Francisco, CA, UNITED STATES

Dayem, Linda, Belmont, CA, UNITED STATES

NUMBER KIND DATE -----US 2002142401 A1 US 2001-942407 A1 PATENT INFORMATION: 20021003 APPLICATION INFO.: 20010829 (9) RELATED APPLN. INFO.: Division of Ser. No. US 2000-699136, filed on 27 Oct 2000, PENDING NUMBER DATE \_\_\_\_\_\_ PRIORITY INFORMATION: US 1999-161703P 19991027 (60) US 1999-161414P 19991025 (60) US 2000-206082P 20000518 (60) DOCUMENT TYPE: Utility APPLICATION FILE SEGMENT: Carolyn A. Favorito, Morrison & Foerster LLP, Suite LEGAL REPRESENTATIVE: 500, 3811 Valley Centre Drive, San Diego, CA, 92130-2332 NUMBER OF CLAIMS: 25 EXEMPLARY CLAIM: NUMBER OF DRAWINGS: 1 Drawing Page(s) LINE COUNT: 3389 CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 14 OF 14 WPIDS COPYRIGHT 2007 L4THE THOMSON CORP on STN TI Novel isolated, purified, or recombinant nucleic acid comprising polyketide modifying gene, there gene encodes polyketide modifying enzyme e.g., MegR, MegK, or MegM enzymes useful for producing modified polyketide 2004-203379 [19] AN WPIDS UPAB: 20060121 AB WO 2004003169 A2 NOVELTY - An isolated, purified, or recombinant nucleic acid (I) comprising a polyketide modifying gene, where the gene encodes a polyketide modifying enzyme chosen from MegR, MegF, MegK , MegCIV, MegCV, MegBVI, MegBIII, MegL, and MegM enzymes, is new. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) an isolated, purified, or recombinant nucleic acid (II) comprising genes for the biosynthesis mycarose for attachment to a polyketide, the enzymes comprising the MegM, MegL, MegBIII, MegBIV, MegDIV, MegBII-2, and MegBVI enzymes; (2) an isolated, purified, or recombinant nucleic acid (III) comprising genes for the biosynthesis mycarose for attachment of megosamine of a polyketide, the enzymes comprising the MegM, MegL , MegCII, MegBVI, MegDIV, MegDV, MegDII, MegDIII, and MegDI enzymes; (3) an isolated, purified, or recombinant nucleic acid (IV) comprising genes for the biosynthesis of desosamine to a polyketide, the enzymes consisting of the MegM, MegL, MegCII, MegCIV, MegCV, MegDII, and MegDIII enzymes; (4) an expression vector (V) comprising (I); (5) a host cell comprising (I); (6) a host cell comprising (II) that expresses a polyketide modifying enzyme encoded by a gene from a mycarose biosynthetic gene set, where the enzyme is chosen from MegM, MegL , MegBIII, MegBIV, MegDIV, MegBII-2, and MegBVI, MegBV, and MegF; (7) a host cell comprising (III) that expresses a polyketide modifying enzyme encoded by a gene from a megosamine

biosynthetic gene set, where the enzyme is chosen from MegM, MegL, MegCII, MegBVI, MegDIV, MegDV, MegDVI, MegDVII, MegDII, and

MegDI; and

(8) a host cell comprising (IV) that expresses a polyketide modifying enzyme encoded by a gene from a desosamine biosynthetic gene set, where the enzyme is chosen from MegM, MegL, MegCII, MegCIV, MegCV, MegDII, and MegDII, and MegCIII.

USE - (M1) is useful for producing a modified polyketide, which involves culturing a recombinant cell comprising (I) under conditions in which the cell expresses a product of a gene encoded by (I) under conditions in which the unmodified polyketide is present, and producing the modified polyketide. In (M1), the cell further comprises (I) one or more module of a polyketide synthase. The cell produces megosamine and can attach megosamine to a polyketide, where the cell, it its naturally occurring non-recombinant state cannot produce megosamine. (All claimed.)

DESCRIPTION OF DRAWINGS - The drawing shows a schematic of the megalomicin polyketide synthase (meg DEBS) and corresponding meg genes upstream and downstream of the meg DEBS region and cosmids overlapping

this region.

ACCESSION NUMBER: 2004-203379 [19] WPIDS

DOC. NO. CPI: C2004-080057 [19]

TITLE: Novel isolated, purified, or recombinant nucleic acid

comprising polyketide modifying gene, there gene encodes

polyketide modifying enzyme e.g., MegR, MegK,

or  ${\tt MegM}$  enzymes useful for producing modified polyketide

DERWENT CLASS: B03; B04; C02; D16

INVENTOR: GRAMAJO H; HU Z; HUTCHINSON C R; HUTCHINSON R C; KATZ L;

REID R

PATENT ASSIGNEE: (GRAM-I) GRAMAJO H; (HUZZ-I) HU Z; (HUTC-I) HUTCHINSON C

R; (KATZ-I) KATZ L; (KOSA-N) KOSAN BIOSCIENCES INC;

(REID-I) REID R

COUNTRY COUNT: 103

PATENT INFO ABBR.:

PATENT NO	KIND DATE		LA	 MAIN IPC
WO 2004003169 AU 2003258978 US 20040203015 AU 2003258978	A2 20040108 A1 20040119 A1 20041014	(200419) * (200447) (200468)	EN EN EN	

#### APPLICATION DETAILS:

PATENT NO KIND	APPLICATION DATE
WO 2004003169 A2	WO 2003-US20681 20030630
US 20040203015 A1 Provisional	US 2002-393016P 20020628
AU 2003258978 A1	AU 2003-258978 20030630
US 20040203015 A1	US 2003-611442 20030630
AU 2003258978 A8	AU 2003-258978 20030630

#### FILING DETAILS:

PATENT NO	KIND		PATENT NO	
AU 2003258978	A1	Based on	WO 2004003169 A	
AU 2003258978	A8	Based on	WO 2004003169 A	

PRIORITY APPLN. INFO: US 2002-393016P 20020628 US 2003-611442 20030630

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(FILE 'HOME' ENTERED AT 15:33:39 ON 13 APR 2007)

FILE 'MEDLINE, USPATFULL, DGENE, EMBASE, WPIDS, BIOSIS' ENTERED AT

15:39:17 ON 13 APR 2007

548 S (MEGL OR MEGK OR MEGF OR MEGBIII OR MEGCV) . L1

18 S L1 AND (GENE CLUSTER) L2

L3 14 S L2 AND (VECTOR)

L4 14 S L3 AND (HOST CELL)

=> s l1 and (DNA)

132 L1 AND (DNA)

=> s 15 and (modifying enzyme)

9 L5 AND (MODIFYING ENZYME)

=> d l6 ti abs ibib tot

ANSWER 1 OF 9 USPATFULL on STN 1.6

Heterologous production of polyketides ΤI

AB Recombinant E. coli host cells that comprise recombinant DNA expression vectors that drive expression of methylmalonyl CoA mutase from Propionibacterium shermanii or Streptomyces cinnamonensis as well as Propionibacterium shermanii epimerase can produce S-methylmalonyl CoA, a required substrate for the production of polyketides by most modular polyketide synthases and is not present in wild-type E. coli host cells.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2006:63029 USPATFULL

TITLE:

Heterologous production of polyketides

INVENTOR(S):

Santi, Daniel, San Francisco, CA, UNITED STATES

Peck, Larry, San Carlos, CA, UNITED STATES Dayem, Linda, Belmont, CA, UNITED STATES Kealey, James, San Rafael, CA, UNITED STATES

PATENT ASSIGNEE(S):

Kosan Biosciences, Inc., Hayward, CA, UNITED STATES

(U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 7011959	B1	20060314	
APPLICATION INFO.:	US 2000-699136		20001027	(9)

NUMBER DATE

PRIORITY INFORMATION:

US 1999-161703P 19991027 (60)

DOCUMENT TYPE:

Utility

FILE SEGMENT:

GRANTED

PRIMARY EXAMINER:

Kerr, Kathleen

LEGAL REPRESENTATIVE:

Ashley, Gary W.

NUMBER OF CLAIMS:

19

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS:

9 Drawing Figure(s); 9 Drawing Page(s)

LINE COUNT:

3239

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 2 OF 9 USPATFULL on STN

Gene cluster for fostriecin biosynthesis TI

AB Domains of fostriecin polyketide synthase and modification enzymes and polynucleotides encoding them are provided. Methods to prepare fostriecin in pharmaceutically useful quantities are described, as are methods to prepare fostriecin analogs and other polyketides using the polynucleotides encoding fostriecin polyketide synthase domains or modifying enzymes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2005:171298 USPATFULL

Gene cluster for fostriecin biosynthesis TITLE:

Reid, Ralph C., San Rafael, CA, UNITED STATES INVENTOR(S):

Hu, Zhihao, Castro Valley, CA, UNITED STATES

Tang, Li, Foster City, CA, UNITED STATES

KOSAN BIOSCIENCES, INC., A Delaware corporation, PATENT ASSIGNEE(S): Hayward, CA, UNITED STATES (U.S. corporation)

> KIND DATE NUMBER -----

US 2005148045 A1 20050707 US 2004-922282 A1 20040818 PATENT INFORMATION:

A1 20040818 (10) APPLICATION INFO.:

> NUMBER DATE -----

PRIORITY INFORMATION: US 2003-496306P 20030818 (60)

DOCUMENT TYPE: Utility

APPLICATION FILE SEGMENT:

LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO

CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 5 Drawing Page(s)

LINE COUNT: 9199

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 3 OF 9 USPATFULL on STN L6

Disorazole polyketide synthase encoding polynucleotides TI

Domains of disorazole polyketide synthase and polynucleotides encoding AB them are provided. Methods to prepare disorazoles in pharmaceutically useful quantities are described, as are methods to prepare disorazole analogs and other polyketides using the polynucleotides encoding disorazole polyketide synthase domains or modifying enzymes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2005:37505 USPATFULL

TITLE: Disorazole polyketide synthase encoding polynucleotides

Julien, Bryan, Oakland, CA, UNITED STATES INVENTOR(S):

Reid, Ralph C., San Rafael, CA, UNITED STATES

Kosan Biosciences, Inc., Hayward, CA, UNITED STATES, PATENT ASSIGNEE(S):

94545 (U.S. corporation)

KIND DATE NUMBER -----US 2005032184 A1 20050210 US 2003-729802 A1 20031205 (10) PATENT INFORMATION: APPLICATION INFO.:

NUMBER DATE -----PRIORITY INFORMATION: US 2003-512892P 20031020 (60) US 2003-484934P 20030702 (60) US 2003-473311P 20030522 (60) US 2003-465038P 20030423 (60) US 2003-455521P 20030317 (60) US 2002-431272P 20021206 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO

CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834

NUMBER OF CLAIMS: 20 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 7 Drawing Page(s)

LINE COUNT: 4711

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 4 OF 9 USPATFULL on STN

TI Recombinant genes for polyketide modifying enzymes

AB Materials and methods to produce modified polyketides are disclosed. The

biosynthesis, transfer and regulator genes for various sugars to

effectuate polyketide modification are disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:260518 USPATFULL

TITLE: Recombinant genes for polyketide modifying enzymes INVENTOR(S): Hutchinson, C. Richard, San Mateo, CA, UNITED STATES

Katz, Leonard, Oakland, CA, UNITED STATES Reid, Ralph, San Rafael, CA, UNITED STATES Hu, Zhihao, Castro Valley, CA, UNITED STATES

Gramajo, Hugo, Berkeley, CA, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION: US 2004203015 A1 20041014

APPLICATION INFO.: US 2003-611442 A1 20030630 (10)

NUMBER DATE

PRIORITY INFORMATION: US 2002-393016P 20020628 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Ted Apple, (Townsend and Townsend and Crew), 379 Lytton

Avenue, Palo Alto, CA, 94301

NUMBER OF CLAIMS: 23 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 3 Drawing Page(s)

LINE COUNT: 2721

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 5 OF 9 USPATFULL on STN

TI Heterologous production of polyketides

AB Recombinant host cells that comprise recombinant DNA

expression vectors that drive expression of a product and a precursor for biosynthesis of that product can be used to produce useful products such as polyketides in host cells that do not naturally produce the product or produce the product or precursor at low levels due to the absence of the precursor or the presence of the precursor in rate limiting amounts.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:239735 USPATFULL

TITLE: Heterologous production of polyketides

INVENTOR(S): Santi, Daniel, San Francisco, CA, UNITED STATES
Dayem, Linda, San Anselmo, CA, UNITED STATES
Kealey, James, San Anselmo, CA, UNITED STATES

NUMBER KIND DATE
US 2004185541 A1 20040923

PATENT INFORMATION: US 2004185541 A1 20040923 APPLICATION INFO.: US 2004-829897 A1 20040421 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-942407, filed on 29 Aug 2001, PENDING Division of Ser. No. US 2000-699136,

filed on 27 Oct 2000, PENDING

NUMBER DATE

PRIORITY INFORMATION: US 1999-161703P 19991027 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: MORRISON & FOERSTER LLP, 3811 VALLEY CENTRE DRIVE,

SUITE 500, SAN DIEGO, CA, 92130-2332

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 1 Drawing Page(s)

LINE COUNT: 3330

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 6 OF 9 USPATFULL on STN

TI Recombinant chalcomycin polyketide synthase and modifying genes

Domains of chalcomycin polyketide synthases and modification enzymes and polynucleotides encoding them are provided. Methods to prepare chalcomycin in pharmaceutically useful quantities are described, as are methods to prepare chalcomycin analogs and other polyketides using the polynucleotides encoding chalcomycin polyketide synthase domains or

modifying enzymes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:171894 USPATFULL

TITLE: Recombinant chalcomycin polyketide synthase and

modifying genes

INVENTOR(S): Katz, Leonard, Oakland, CA, UNITED STATES

Reid, Ralph C., San Rafael, CA, UNITED STATES Hu, Zhihao, Castro Valley, CA, UNITED STATES Schirmer, Andreas, Hayward, CA, UNITED STATES Ward, Shannon L., Pleasanton, CA, UNITED STATES Reeves, Christopher, Orinda, CA, UNITED STATES

NUMBER DATE

PRIORITY INFORMATION: US 2002-420994P 20021024 (60)

US 2003-493966P 20030808 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: MORRISON & FOERSTER LLP, 755 PAGE MILL RD, PALO ALTO,

CA, 94304-1018

NUMBER OF CLAIMS: 30 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 2 Drawing Page(s)

LINE COUNT: 9387

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 7 OF 9 USPATFULL on STN

TI Heterologous production of polyketides

AB Recombinant host cells that comprise recombinant DNA expression vectors that drive expression of a product and a precursor for biosynthesis of that product can be used to produce useful products such as polyketides in host cells that do not naturally produce the product or produce the product or precursor at low levels due to the

absence of the precursor or the presence of the precursor in rate

limiting amounts.

CAS INDEXING IS AVAILABLE FOR THIS PATENT. ACCESSION NUMBER: 2004:7438 USPATFULL

TITLE: Heterologous production of polyketides

INVENTOR(S): Santi, Daniel V., San Francisco, CA, UNITED STATES

Khosla, Chaitan, Stanfrod, CA, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION: US 2004005672 A1 20040108

APPLICATION INFO.: US 2003-371475 A1 20030221 (10)

NUMBER DATE

PRIORITY INFORMATION: US 2002-358936P 20020222 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Kosan Biosciences, Inc., Intellectual Property

Department, 3832 Bay Center Place, Hayward, CA, 94545

NUMBER OF CLAIMS: 20 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 13 Drawing Page(s)

LINE COUNT: 3491

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 8 OF 9 USPATFULL on STN

TI Isolated gene for methylmalonyl CoA epimerase and uses thereof

AB Recombinant host cells that comprise recombinant DNA

expression vectors that drive expression of a product and a precursor for biosynthesis of that product can be used to produce useful products such as polyketides in host cells that do not naturally produce the product or produce the product or precursor at low levels due to the absence of the precursor or the presence of the precursor in rate limiting amounts.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:258831 USPATFULL

TITLE: Isolated gene for methylmalonyl CoA epimerase and uses

thereof

INVENTOR(S): Santi, Daniel, San Francisco, CA, UNITED STATES

Dayem, Linda, Belmont, CA, UNITED STATES Kealey, James, San Rafael, CA, UNITED STATES

RELATED APPLN. INFO.: Division of Ser. No. US 2000-699136, filed on 27 Oct

2000, PENDING

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Carolyn A. Favorito, Morrison & Foerster LLP, Suite

500, 3811 Valley Centre Drive, San Diego, CA,

92130-2332

NUMBER OF CLAIMS: 25 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 1 Drawing Page(s)

LINE COUNT: . 3389

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 9 OF 9 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN

Novel isolated, purified, or recombinant nucleic acid comprising polyketide modifying gene, there gene encodes polyketide modifying enzyme e.g., MegR, MegK, or MegM enzymes useful for

producing modified polyketide

AN 2004-203379 [19] WPIDS

AB WO 2004003169 A2 UPAB: 20060121

NOVELTY - An isolated, purified, or recombinant nucleic acid (I) comprising a polyketide modifying gene, where the gene encodes a polyketide modifying enzyme chosen from MegR, MegK, MegCIV, MegCV, MegBVI,

MegBIII, MegL, and MegM enzymes, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) an isolated, purified, or recombinant nucleic acid (II) comprising genes for the biosynthesis mycarose for attachment to a polyketide, the enzymes comprising the MegM, MegL, MegBIII, MegBIV, MegDIV, MegBII-2, and MegBVI enzymes;
- (2) an isolated, purified, or recombinant nucleic acid (III) comprising genes for the biosynthesis mycarose for attachment of megosamine of a polyketide, the enzymes comprising the MegM, MegL, MegCII, MegBVI, MegDIV, MegDV, MegDII, MegDIII, and MegDI enzymes;
- (3) an isolated, purified, or recombinant nucleic acid (IV) comprising genes for the biosynthesis of desosamine to a polyketide, the enzymes consisting of the MegM, MegL, MegCII, MegCIV, MegDII, and MegDIII enzymes;
  - (4) an expression vector (V) comprising (I);
  - (5) a host cell comprising (I);
- (6) a host cell comprising (II) that expresses a polyketide modifying enzyme encoded by a gene from a mycarose biosynthetic gene set, where the enzyme is chosen from MegM, MegL , MegBIII, MegBIV, MegDIV, MegBII-2, and MegBVI, MegBV, and MegF;
- (7) a host cell comprising (III) that expresses a polyketide modifying enzyme encoded by a gene from a megosamine biosynthetic gene set, where the enzyme is chosen from MegM, MegL, MegCII, MegBVI, MegDIV, MegDVI, MegDVII, MegDII, and MegDI; and
- (8) a host cell comprising (IV) that expresses a polyketide modifying enzyme encoded by a gene from a desosamine biosynthetic gene set, where the enzyme is chosen from MegM, MegL, MegCII, MegCIV, MegCV, MegDII, and MegDII, and MegCIII.

USE - (M1) is useful for producing a modified polyketide, which involves culturing a recombinant cell comprising (I) under conditions in which the cell expresses a product of a gene encoded by (I) under conditions in which the unmodified polyketide is present, and producing the modified polyketide. In (M1), the cell further comprises (I) one or more module of a polyketide synthase. The cell produces megosamine and can attach megosamine to a polyketide, where the cell, it its naturally occurring non-recombinant state cannot produce megosamine. (All claimed.)

DESCRIPTION OF DRAWINGS - The drawing shows a schematic of the megalomicin polyketide synthase (meg DEBS) and corresponding meg genes upstream and downstream of the meg DEBS region and cosmids overlapping this region.

ACCESSION NUMBER:

2004-203379 [19] WPIDS

DOC. NO. CPI:

C2004-080057 [19]

TITLE:

Novel isolated, purified, or recombinant nucleic acid comprising polyketide modifying gene, there gene encodes

polyketide modifying enzyme e.g.,
MegR, MegK, or MegM enzymes useful for

producing modified polyketide

DERWENT CLASS:

B03; B04; C02; D16

INVENTOR:

GRAMAJO H; HU Z; HUTCHINSON C R; HUTCHINSON R C; KATZ L;

REID R

PATENT ASSIGNEE:

(GRAM-I) GRAMAJO H; (HUZZ-I) HU Z; (HUTC-I) HUTCHINSON C

R; (KATZ-I) KATZ L; (KOSA-N) KOSAN BIOSCIENCES INC;

(REID-I) REID R

COUNTRY COUNT:

103

PATENT INFO ABBR.:

PATENT NO	KIND DATE	WEEK	LA	PG	MAIN IPC
WO 2004003169 AU 2003258978 US 20040203015 AU 2003258978	A2 20040108 A1 20040119 A1 20041014 A8 20051117	(200447) (200468)		51[3]	

### APPLICATION DETAILS:

PATENT NO KIND	APPLICATION DATE
WO 2004003169 A2	WO 2003-US20681 20030630
US 20040203015 Al Provisional	US 2002-393016P 20020628
AU 2003258978 A1	AU 2003-258978 20030630
US 20040203015 A1	US 2003-611442 20030630
AU 2003258978 A8	AU 2003-258978 20030630

#### FILING DETAILS:

PATENT NO	KIND	PAT	PATENT NO		
AU 2003258978	Al Base	d on WO	2004003169	 A	
AU 2003258978	A8 Base	d on WO	2004003169	Α	

PRIORITY APPLN. INFO: US 2002-393016P 20020628 US 2003-611442 20030630